

REMARKS

Claims 1-6 and 8-11 are at issue in the instant application. Claim 7 has been canceled. Claims 1-6 and 8-11 were rejected as obvious over Majumdar et al. in view of one or more of Drake et al., McCarthy et al. and Chen.

The applicants respectfully traverse the rejection of independent claim 1 as obvious over Majumdar et al. in view of Drake et al. Majumdar et al. does not disclose a semiconductor power module including a lead frame and a heat that contacts the lead frame, as recited in claim 1 of the instant application. To the contrary, the heat sink 1 disclosed by Majumdar et al. is separated from the lead frame 3 by an insulating resin 2.

Drake et al. also fails to disclose a heat sink that contacts a lead frame, as recited in claim 1. In fact, the thermally conductive, electrically insulating heat sink 12 disclosed by Drake et al. is clearly separated from the leads 21. See, e.g., Fig. 1B of Drake et al.

Neither McCarthy et al. nor Chen overcomes the deficiencies of the above-noted references. McCarthy et al. merely discloses a heat detecting circuit and does not disclose or suggest any structure remotely similar to the heat sink recited in claim 1 of the instant application. Further, Chen merely discloses a demountable heat spreader 25 that is neither insulating nor in contact with a lead frame, as recited in claim 1 of the instant application.

Thus, whether taken individually or in combination, Majumdar et al., Drake et al., McCarthy et al. and Chen fail to teach or suggest all of the recitations of independent claim 1 and, as a result, claim 1 cannot be rendered obvious thereby. It is clear that a *prima facie* case of obviousness

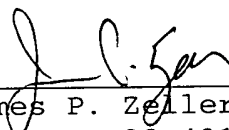
cannot be established where all the limitations of a claimed combination are not taught or suggested by the prior art. See *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). See also, MPEP 2143.03. Accordingly, the applicants submit that claim 1 and claims 2-6 and 8-11 dependent thereon are now in condition for allowance.

For the foregoing reasons, reconsideration and withdrawal of the rejections of the claims and allowance thereof are respectfully requested.

Should the examiner wish to discuss the foregoing, or any matter of form, in an effort to advance this application toward allowance, he is urged to telephone the undersigned at the number indicated below.

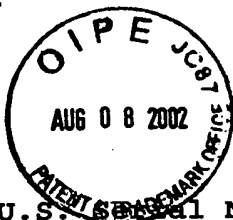
Respectfully submitted,

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VERSION WITH MARKINGS SHOWING CHANGES MADE

IN THE CLAIMS:

Please amend claims 1, 8, 10 and 11 as follows:

1. (amended) A semiconductor power module, comprising:
a lead frame having a first portion at a first level, a second portion surrounding the first portion at a second level, and a plurality of terminals connected to the second portion;

a power circuit mounted on a first surface of the first portion;

[an insulator] a heat sink having an electrically insulating property and thermal conductivity, wherein the [insulator is adjacent to] heat sink contacts a second surface opposite the first surface of the first portion of the lead frame; and

a sealer having an electrically insulating property that covers the power circuit.

8. (amended) The semiconductor power module of claim 1, wherein the [insulator] heat sink is adhered to at least one of the lead frame and the sealer with an adhesive.

10. (amended) The semiconductor power module of claim 1, wherein the [insulator] heat sink and the sealer each have grooves or rings and wherein the [insulator] heat sink and the sealer are connected to each other by means of the grooves or the rings.

11. (amended) The semiconductor power module of claim 1, wherein the [insulator] heat sink is sheet-shaped and comprises at least one compound selected from the group consisting of Al_2O_3 , AlN and BEO.